



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,485	11/14/2003	Richard A. Proulx	086333.00004	9209
34261	7590	06/22/2005	EXAMINER	
HOLLAND & KNIGHT LLP 633 WEST FIFTH STREET, TWENTY-FIRST FLOOR LOS ANGELES, CA 90071-2040			EASHOO, MARK	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,485

Applicant(s)

PROULX ET AL.

Examiner

Mark Eashoo, Ph.D.

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Proulx (US Pat. 5,807,462) in view of Groff et al. (US Pat. 4,288,463) and Mize et al. (US Pat. 4,186,239).

Proulx teaches the basic claimed process of forming a cutting line, comprising: extruding a pair of molten filaments (2:1-47 and Figs. 1, 2, 5, 6); directing the molten filaments into a quench bath (2:1-47 and Figs. 1, 2, 5, 6); pulling the molten filaments through the quench bath to initiate crystallization and bond/weld the filaments together (2:1-47 and Figs. 1, 2, 5, 6); concurrently stretching and heating the bonded/joined filaments (2:1-47 and Figs. 1, 2, 5, 6); heating the strands into a relaxed disposition (2:1-47 and Figs. 1, 2, 5, 6); and extruding a plurality of pairs of molten filaments (Figs. 1, 5, 8 and 7a-d).

Proulx does not teach twisting filaments by rotating a die about a central longitudinal axis during extrusion at a specific rotational speed. Nonetheless, Groff et al. teaches twisting filaments by rotating a die about a central longitudinal axis during extrusion (Fig. 1). Groff et al. further teaches that plurality of dies that extrude a pair of filaments are synchronously rotated (Fig. 1). Official Notice is given that the rotation rate of a die is a known variable and optimizable process parameter. At the time of invention a person of ordinary skill in the art would have found it obvious to have formed twisted filaments by rotating a die about a central longitudinal axis during extrusion, as taught by Groff et al., in the process of Proulx, and would have been motivated to form such product since Mize et al. suggests that twisting multi-lobe cutting filaments reduces fibrillation (6:5-15 and Fig. 11) and would have rotated the die at the appropriate speed, as determined through routine experimentation and optimization, in order to form a desired degree of twist per linear foot.

Art Unit: 1732

Proulx does not teach an oblately shaped die hole. Nonetheless, Mize et al. teaches an oblately shaped filament (Fig. 3). It is implicit that the die hole that formed the filament of Mize et al. was oblately shaped. Mize et al. further substantially teaches rotating a filament of any desired shape about a central longitudinal axis (Fig. 11). At the time of invention a person of ordinary skill in the art would have found it obvious to have used an oblately shaped die hole, as taught by Mize et al., in the process of Proulx, and would have been motivated to do so since Mize et al. suggests that such shaped filament is desired in the cutting line art.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached form PTO-892.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 5,814,176, to Proulx in view of Groff et al. (US Pat. 4,288,463) and Mize et al. (US Pat. 4,186,239).

Claims 1-14 of Proulx substantially teaches the basic claimed process of forming a cutting line, comprising: extruding a pair of molten filaments; directing the molten filaments into a quench bath; pulling the molten filaments through the quench bath to initiate crystallization and bond/weld the filaments together; concurrently stretching and heating the bonded/joined filaments; heating the strands into a relaxed disposition; and extruding a plurality of pairs of molten filaments.

Proulx does not teach twisting filaments by rotating a die about a central longitudinal axis during extrusion at a specific rotational speed. Nonetheless, Groff et al. teaches twisting filaments by rotating a die about a central longitudinal axis during extrusion (Fig. 1). Groff et al. further teaches that plurality of dies that extrude a pair of filaments are synchronously rotated (Fig. 1). Official Notice is given that the rotation rate of a die is a known variable and optimizable process parameter. At the time of invention a

Art Unit: 1732

person of ordinary skill in the art would have found it obvious to have formed twisted filaments by rotating a die about a central longitudinal axis during extrusion, as taught by Groff et al., in the process of Proulx, and would have been motivated to form such product since Mize et al. suggests that twisting multi-lobe cutting filaments reduces fibrillation (6:5-15 and Fig. 11) and would have rotated the die at the appropriate speed, as determined through routine experimentation and optimization, in order to form a desired degree of twist per linear foot.

Proulx does not teach an oblately shaped die hole. Nonetheless, Mize et al. teaches an oblately shaped filament (Fig. 3). It is implicit that the die hole that formed the filament of Mize et al. was oblately shaped. Mize et al. further substantially teaches rotating a filament of any desired shape about a central longitudinal axis (Fig. 11). At the time of invention a person of ordinary skill in the art would have found it obvious to have used an oblately shaped die hole, as taught by Mize et al., in the process of Proulx, and would have been motivated to do so since Mize et al. suggests that such shaped filament is desired in the cutting line art.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (571) 272-1197. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mark Eashoo, Ph.D.
Primary Examiner
Art Unit 1732

17/Jul/05

17-Jun-05
me